Claims

1. A method for producing a first polyketide, said method comprising expressing polyketide synthase (PKS) genes encoding a PKS that produces the first polyketide in a cell that has been optimized for the production of a second polyketide.

2. The method of Claim 1, wherein said first polyketide is a derivative of the second polyketide, and said method further comprises altering the PKS genes in the overproducing cell such that those genes express a PKS that produces the first polyketide.

3. The method of Claim 1, said method further comprising introducing genes that express a PKS that produces the first polyketide into the overproducing cell.

4. The method of Claim 1, wherein the genes that express the PKS that produces the second polyketide are deleted or otherwise rendered inactive before or after introduction of the genes that encode the PKS that produces the first polyketide.

5. The method of Claim 1, wherein the overproducing cell produces the second polyketide at a level greater than 1 g/L.

6. The method of Claim 1, wherein the overproducing cell produces the second polyketide at a level greater than 10 g/L.

7. The method of Claim 1, wherein the overproducing cell produces the first polyketide at a level greater than 10 mg/L.

8. The method of Claim 1, wherein the overproducing cell produces the first polyketide at a level greater than 100 mg/L

9. An overproducing host cell useful in the method of Claim 1 from which the genes encoding the second polyketide have been deleted and in which the genes

encoding the PKS that produces the first polyketide can be readily introduced and expressed.

10. The host cell of Claim 9 that is derived from a *Saccharopolyspora erythraea* host cell that produces erythromycins at a level exceeding 2.5 g/L and is modified by deletion of all or substantially all of the *eryA* genes.

11. The host cell of Claim 9 that is derived from a *Saccharopolyspora erythraea* host cell that produces erythromycins at a level exceeding 2.5 g/L and is modified by mutational inactivation of the ketosynthase (KS) domain of module 1 of the DEBS PKS.

12. The host cell of Claim 9 that produces 10,11-anhydro-6-deoxyerythronolide B.

13. A recombinant host cell that has been modified, relative to the cell from which it was derived, to contain one or more *attB* or *attP* sites.

14. The cell of Claim 13 that is derived from a cell that has been optimized by mutagenesis to produce a polyketide at high levels.

15. The cell of Claim 13 that is a *Saccharopolyspora erythraea* host cell.

16. The cell of Claim 15 that is derived from *Saccharopolyspora erythraea* NRRL2338.

17. The cell of Claim 15 that is derived from a cell that produces erythromycins at greater than 2.5 g/L.

18. A method for obtaining a transformant of a cell of Claim 13, which comprises conjugating said cell with a cell that contains a vector that comprises the complementary attachment site in the presence of an integrase.

19. A cell produced by the method of Claim 18.

20. The cell of Claim 19 that produces a polyketide that is not produced by the cells prior to said conjugating step.